

Appendix 5—Warranty and Maintenance

Table of Contents

1.	INTRODUCTION.....	1
1.1.	DOCUMENT OVERVIEW	1
1.2.	DOCUMENT SCOPE	1
1.3.	ABBREVIATIONS AND DEFINITIONS.....	1
1.4.	NAMING CONVENTIONS	1
2.	NOT USED	2
3.	WARRANTY AND MAINTENANCE.....	3
3.1.	GENERAL	3
3.2.	VENDOR PROVIDED MAINTENANCE	3
3.3.	SPARE PARTS PROCUREMENT.....	4
3.4.	SPARE PARTS INVENTORY MANAGEMENT	5
3.5.	NOTIFICATIONS.....	5
3.5.1.	Verbal Notification	5
3.5.2.	Written Notification	6
3.5.3.	Automatic Notification	6
3.6.	RESPONSE TO NOTIFICATION.....	6
3.6.1.	Priority 1 Maintenance Events	6
3.6.2.	Priority 2 Maintenance Events	6
3.6.3.	Priority 3 Maintenance Events	6
3.7.	RESPONSE TIME	6
3.8.	REPAIR TIME.....	7
3.9.	REQUIRED SERVICE LEVELS	7
3.9.1.	Priority 1 Maintenance Events	7
3.9.2.	Priority 2 Maintenance Events	7
3.9.3.	Priority 3 Maintenance Events	7
3.10.	MTTRESPOND / MTTREPAIR DETAIL	8
3.10.1.	Chargeable Failures.....	8
3.10.2.	Non-Chargeable Failures	8
3.11.	MAINTENANCE OF TRAFFIC	9
3.11.1.	Lane Closure Rental.....	9
3.12.	PERFORMANCE AUDIT	10
3.12.1.	Performance Audit Report	11
3.13.	SHARED MAINTENANCE.....	11
3.13.1.	Warranty	11
4.	SHARED MAINTENANCE TRANSITION	13
4.1.	SHARED MAINTENANCE ACTIVITIES	13
4.1.1.	Milestone Requirements	13
4.1.2.	Transition Plan	14
4.1.3.	Transition Training	14
4.1.4.	Operations and Maintenance Manual.....	16
4.2.	CONTINUED VENDOR RESPONSIBILITIES	16

List of Tables

Table 3-1 – Priority Level Response and Repair Times 7

Table 3-2-Lane Closure Rental Matrix..... 9

1. INTRODUCTION

The **Warranty and Maintenance Period** of the **Contract**, Segment of Work # 2, is divided into two phases: **Vendor Provided Maintenance** and **Shared Maintenance**. During Vendor Provided Maintenance, which shall last for at least one (1) year and no more than ten (10) years, the **Vendor** will be responsible for maintaining the entire **TCS**. This includes, but is not limited to: addressing **Hardware** and **Software** issues and tracking progress in **MOMS**; updating the spare parts inventory in **MOMS**; conducting annual Performance Audits, completing Performance Audit Reports; completing monthly Maintenance Reports; and submitting monthly invoices. When issues occur, the urgency of the response shall be dictated by the impact of the issue on revenue collection. Liquidated Damages, proportionate to the impact, shall be assigned when the Vendor fails to meet the established maintenance requirements. Monthly performance shall be reported in the Maintenance Reports, while more thorough evaluations shall be conducted annually and reported in the Performance Audit Reports.

If **WSDOT** elects to switch to a Shared Maintenance arrangement, the Shared Maintenance Transition shall occur. The Shared Maintenance Transition payment shall facilitate the transition process through the development of a Transition Plan, training of WSDOT maintenance personnel, and the creation of an **Amendment** to the Contract. Only the first phase, Vendor Provided Maintenance, and the Shared Maintenance Transition are detailed within this document.

1.1. Document Overview

This requirements document is divided into four major sections. Section 1 explains the scope of the document as a whole. Section 2 is not used, Section 3 explains the maintenance requirements for the various phases of **Work** included in this **Project's** scope of work, and Section 4 describes the Shared Maintenance Transition that may occur any time after the first year of Vendor Provided Maintenance.

1.2. Document Scope

The requirements set forth herein describe the warranty and maintenance requirements under Segment of Work #2 for the **Toll Collection System** (TCS) that WSDOT desires to procure. These requirements will be used as a baseline from which the Vendor will develop more detailed system design documents.

1.3. Abbreviations and Definitions

All capitalized terms and abbreviations used in this Appendix 5, but not expressly defined herein, have the respective meanings set forth in **Appendix 1 -- Definitions**, attached to the **RFP**.

1.4. Naming Conventions

Requirements are individually labeled with an abbreviated general descriptor and a requirement number. For example, the label “SR520-5.1” refers to the first warranty and maintenance requirement for the SR 520 TCS in Appendix 5.

2. NOT USED

Requirements SR520-5.1 through SR520-5.8 omitted intentionally.

3. WARRANTY AND MAINTENANCE

It is anticipated that Vendor Provided Maintenance will last from one (1) to ten (10) years, with the potential to move to a Shared Maintenance arrangement at some point during that period. In the event Shared Maintenance is implemented, the Vendor shall warrant the TCS for one year.

3.1. General

- SR520-5.9 The Vendor shall be responsible for all required Products, labor and expenses, including shipping, travel, meals, and lodging, associated with providing the required maintenance and warranty Services and shall not be reimbursed for said items.
- SR520-5.10 To the extent possible, overhead components of the TCS shall be swappable, i.e., removable and replaceable, within fifteen (15) minutes, excluding lane closure time.
- SR520-5.11 The Vendor shall coordinate and perform all necessary maintenance, repair, renewal and replacement of Products through the term of the Contract.
- SR520-5.12 The Vendor shall perform all annual Performance Audits as specified in Section 3.12.
- SR520-5.13 The Vendor shall maintain current and accurate records for all System maintenance Work.
- SR520-5.14 The records shall be organized and managed by a computerized data and information management system as part of **Maintenance Online Management System (MOMS)**.
- SR520-5.15 All System and Products maintenance events detected and/or recorded by maintenance staff shall be recorded on the MOMS database.

3.2. Vendor Provided Maintenance

The requirements within this section are applicable from System Acceptance to either WSDOT's formal transfer of first response maintenance responsibilities, as provided in Section 4) or the end of the Warranty and Maintenance Period.

- SR520-5.16 The Vendor shall maintain a staff of personnel of sufficient quantity and quality to ensure that repairs can be performed twenty-four (24) hours a day, seven (7) days a week.
- SR520-5.17 The Vendor shall provide all tools and equipment required to provide maintenance and repairs to the TCS.
- SR520-5.18 The Vendor shall provide all lane closures in accordance with applicable requirements of this RFP during the Vendor Provided Maintenance.

- SR520-5.19 The Vendor shall notify WSDOT thirty (30) minutes before a lane closure is required for emergency maintenance. This allows for any necessary coordination should a major incident affect the **SR 520 Corridor**.
- SR520-5.20 The Vendor shall perform all maintenance to include preventive and emergency maintenance through the term of the Contract.
- SR520-5.21 The Vendor shall provide a preventive maintenance schedule showing what activities will be performed and when each preventive maintenance check will occur.
- SR520-5.22 The Vendor shall provide five (5) **Calendar Days** notice to WSDOT for all preventive maintenance that requires a lane closure.
- SR520-5.23 The Vendor shall coordinate and perform all necessary renewal and replacement of Products through the term of the Contract.
- SR520-5.24 The Vendor shall maintain adequate reserve stock of spare parts and items of Products located in proximity to and will support the Project until the Warranty and Maintenance Periods expire or are terminated.

3.3. Spare Parts Procurement

- SR520-5.25 Thirty (30) Calendar Days prior to the expected **Tolling Commencement** date, the Vendor shall have purchased and have on hand the requisite inventory of spare parts.
- SR520-5.26 WSDOT will provide the following spare parts, as further defined in Appendix 2, in the requisite quantities to the Vendor:
- a. **AVI Readers**
 - b. **AVI Antennas**
 - c. **Server Room Equipment**
- SR520-5.27 The Vendor shall cooperate with and assist WSDOT as necessary to jointly develop a plan to ensure that all spare parts, Products, equipment, and other WSDOT-owned property is stored or otherwise located on the Vendor's or WSDOT's property and shall not be subject to any risk of being confiscated, claimed, attached, withheld by the a landlord, creditor, or similar risk. This cooperation includes, but is not be limited to, affixing appropriate labeling to all property, thereby identifying it as the property of WSDOT, with a WSDOT-specific part or control number.
- SR520-5.28 All spare parts and consumables shall be maintained by the Vendor at a location or locations agreed upon by WSDOT and the Vendor.
- SR520-5.29 WSDOT shall have the right to inspect the spare parts and consumables inventory upon request at any time during the Contract.

3.4. Spare Parts Inventory Management

- SR520-5.30 The Vendor shall provide spare parts inventory control functionality as part of MOMS.
- SR520-5.31 The spare parts inventory control function shall be integrated with the **Work Order** generation function, which shall automatically update and maintain the System and spare parts inventory based on Work Orders and technicians recording of parts used during Work Order closeout.
- SR520-5.32 Spare parts required information includes any parts entered into inventory and shall include details such as, but not limited to:
- OEM** serial number
 - WSDOT-specific serial number
 - Purchase date
 - Time and date part entered into inventory
 - Warranty information
 - Current status
 - Current location of the spare part
 - Time and date part was removed from inventory
 - Any relevant tracking/shipping information.
- SR520-5.33 The details of the repair efforts including problem, status, inventory, warranty, and repair disposition shall be included in MOMS.

3.5. Notifications

Maintenance notifications may be provided to the Vendor through various means. The start of the maintenance response time, for purposes of measuring the Vendor's response time, shall be as described in Sections 3.5.1 through 3.5.3.

3.5.1. Verbal Notification

- SR520-5.34 WSDOT's first conversation with, voicemail to, or electronic page of the Vendor's answering/routing service shall constitute the start of the response time.
- SR520-5.35 The Vendor shall document verbal notification in the Work Order.

3.5.2. Written Notification

- SR520-5.36 Written notification may be emailed to the Vendor twenty-four (24) hour a day, seven (7) days a week. The time stamp in the sent e-mail from WSDOT shall constitute the start of the response time.

3.5.3. Automatic Notification

- SR520-5.37 Automatic alarm and alert messages shall be sent out by MOMS, paging the recipient responsible for response to respond to the failure. The time stamp of the page within MOMS shall constitute the start of the response time.

3.6. Response to Notification

- SR520-5.38 Response to notifications shall be determined by priority as specified in Sections 3.6.1 through 3.6.3 with the exception of issues that could cause harm to the public or that could involve infrastructure failure.
- SR520-5.39 The corresponding response time and repair shall not exceed the mean time prescribed in **Table 3-1**.
- SR520-5.40 The Vendor shall record all response times and repair times for every maintenance event via MOMS and provide full reports of response and repair times to the WSDOT within the monthly Maintenance Report.

3.6.1. Priority 1 Maintenance Events

- SR520-5.41 A Priority 1 Maintenance Event is defined as any malfunction or fault that will result in the immediate loss of revenue and/or hazard to personnel.

3.6.2. Priority 2 Maintenance Events

- SR520-5.42 A Priority 2 Maintenance Event is defined as any malfunction or fault that will not result in immediate loss of revenue but will/may impact operational performance.

3.6.3. Priority 3 Maintenance Events

- SR520-5.43 A Priority 3 Maintenance Event is defined as any action or event reported that will/may impact operational performance, has potential of degrading the System performance, and has no impact to revenue collection.

3.7. Response Time

- SR520-5.44 Response time measurement shall start as described above in Section 3.5.

- SR520-5.45 The response time measurement shall end when the Vendor arrives at the site where the maintenance event occurred, remotely begins addressing the failure, or implements a temporary solution.
- SR520-5.46 In the event a temporary solution is implemented and additional Work is required to wholly correct the issue, a new Work Order shall be created and a new **Priority Level** set.
- SR520-5.47 A Work Order opened following a temporary solution may stay open no longer than thirty (30) Calendar Days.

3.8. Repair Time

- SR520-5.48 Repair time measurement shall start after the technician remotely begins troubleshooting the failure or the Vendor arrives at the site where the maintenance event occurred.
- SR520-5.49 Repair time measurement shall end when corrections have been made and the System has been restored to a fully operating condition. This includes both fixes and temporary solutions.

3.9. Required Service Levels

3.9.1. Priority 1 Maintenance Events

- SR520-5.50 The Vendor shall respond to all Priority 1 Maintenance Events within two (2) hours. The Vendor shall repair all Priority 1 Maintenance Events within two (2) hours such that the System is returned to an operational state.

3.9.2. Priority 2 Maintenance Events

- SR520-5.51 The Vendor shall respond to all Priority 2 Maintenance Events within six (6) hours. The Vendor shall repair all Priority 2 Maintenance Events within six (6) hours such that the System is returned to an operational state.

3.9.3. Priority 3 Maintenance Events

- SR520-5.52 The Vendor shall respond to all Priority 3 Maintenance Events within twelve (12) hours. The Vendor shall repair all Priority 3 Maintenance Events within thirty (30) Calendar Days such that the System is returned to an operational state.

Table 3-1 – Priority Level Response and Repair Times

Maintenance Event Priority	Response Time	Repair Time
Priority 1	2 hrs	2 hrs
Priority 2	6 hrs	6 hrs
Priority 3	12 hrs	30 days

3.10. MTTRespond / MTTRepair Detail

3.10.1. Chargeable Failures

SR520-5.53 Chargeable failures to the Vendor by WSDOT include any failures that are not specifically identified as non-chargeable failures, including but not limited to:

- a. A failure that prevents the Product from performing its designated function, when used and operated under its intended operational and environmental conditions as detailed in the Warranty and Maintenance segment of Work.
- b. A failure that poses a threat to the safety of the Products, TCS customers, or others.
- c. A failure to operate during the first seventy-two (72) hours of power-outage.
- d. An occurrence where data is not successfully transmitted between **the Roadside System** and the **Facility Management and Administration System (FMAS)**, but shall not cause double charging of a single failure (e.g., if the lane is not functioning and does not transmit data to the **Host**, either the lane would be charged or the System would be charged for the failure, but not both).
- e. A failure of Products that allow revenue loss to occur on the TCS that is not already accounted for as a separate performance failure.
- f. Software anomalies and bugs that affect the performance and operation of the TCS.
- g. Shutdown or unavailability of the TCS unless specifically directed by WSDOT.
- h. Failure to properly register or report a **Transaction**.
- i. Failure to electronically send or receive Transaction and payment information.
- j. Failure to generate the reports required to reconcile and audit the System.

3.10.2. Non-Chargeable Failures

SR520-5.54 Non-chargeable failures shall include:

- a. **Force Majeure**, as defined in Appendix 1 of the RFP.

- b. Failure of a test facility or test instrumentation.
- c. System part failures caused by externally applied stress conditions outside of the requirements of the Warranty and Maintenance segment of Work.
- d. System part failures caused by environmental or operating conditions outside of the requirements of the Contract.
- e. Normal operating adjustments as allowed in the test procedure or Maintenance Plan, as applicable.
- f. Failure of WSDOT-provided equipment or communication networks.

3.11. Maintenance of Traffic

SR520-5.55 The Vendor shall provide all traffic control for the maintenance activities specified in Section 4.2 of Appendix 3 in the RFP.

3.11.1. Lane Closure Rental

Due to long periods of congestion and the lack of shoulder access to the SR 520 **Toll Zones**, lane closures during the day should be minimized. Table 3-2 – Lane Closure Rental Matrix defines the day of week, time of day, restrictions for the lane closure, and the lane rental adjustment for the closure. The lane rental fee applies to Vendor Provided Maintenance only.

SR520-5.56 The Vendor shall be required to pay a lane rental fee to close one (1) or more lanes for in-lane maintenance during specific periods of the day and day of week.

SR520-5.57 The lane rental fee shall be specifically called out and deducted within the monthly invoice.

Table 3-2-Lane Closure Rental Matrix

Time Period	Max Closure Allowance	Lane Rental Adjustment	Count Against Repair Time?
Peak 6am - 9am 3pm - 7pm	No Closures	n/a	Yes
Shoulder - Pre 5am - 6am 2pm - 3pm	1/2 Hour, 1 Direction, 1 Lane Only	100%	Yes
Shoulder - Post 9am - 10am 7pm - 9pm	1 Hour, 1 Direction, 1 Lane Only	100%	Yes
Off Peak - Day	2 Hours,	50%	Yes

Table 3-2-Lane Closure Rental Matrix

Time Period	Max Closure Allowance	Lane Rental Adjustment	Count Against Repair Time?
10am - 2pm	1 Direction, 1 Lane Only		
Off Peak - Night 9pm - 5am	No length restriction, 1 Direction, 1 Lane Only	0%	Yes
-- WSDOT may suspend or change the schedule at any time; Provided, that WSDOT shall notify Vendor of such changes seven (7) Calendar Days prior to the effective date of the changes.			

SR520-5.58 The lane rental fee for each closure shall be calculated by subtracting the Potential Revenue of the current closure from the Potential Revenue of the previous period and multiplying by the lane rental adjustment. If the result is a negative number, the lane rental cost will be \$0.

SR520-5.59 The Vendor's traffic control plans relating to maintenance shall be pre-approved by WSDOT.

SR520-5.60 No closures shall be permitted on Friday nights.

SR520-5.61 The Vendor shall submit their request for full directional bridge closures for WSDOT approval at least ten (10) **Business Days** in advance.

3.12. Performance Audit

SR520-5.62 Vendor shall prepare Performance Audit procedures defining the procedures and tests to be performed for the installed and operating TCS.

SR520-5.63 The Performance Audit procedures shall identify the test vehicles that are to be mixed with real traffic and the results to be obtained from the tests.

SR520-5.64 The Performance Audit procedures shall clarify the calculation methods that will be used to evaluate the performance metrics included in the Performance Audit Report.

SR520-5.65 The Performance Audit procedures shall also define the operational data to be reviewed and the analysis that will be conducted on that data for presentation in the Performance Audit report.

SR520-5.66 The Performance Audit procedures shall contain enough detail to enable a third party to reproduce the results.

3.12.1. Performance Audit Report

SR520-5.67 Within thirty (30) Calendar Days after the Performance Audit has been completed the Vendor shall submit a report of the results to WSDOT for review. The report shall include but shall not be limited to the following:

- a. A summary of the overall test results highlighting the general conclusions of the testing and any problems found and corrected; and
- b. An appendix containing the test results and data used in evaluating the System's operational performance.

3.13. Shared Maintenance

WSDOT may decide, during the term of the Contract, but after the first year of maintenance, to transfer first response maintenance responsibilities from the Vendor to WSDOT. First response maintenance activities are those that can be performed quickly and easily in the field and do not require substantial training and experience to complete.

SR520-5.68(a) After WSDOT has indicated its intent to accept first response maintenance responsibilities in accordance with Section 4, WSDOT shall take responsibility for first response maintenance activities defined in the Maintenance Plan and the Operations and Maintenance Manual, but shall reserve the right to notify Vendor of need to perform Work under warranty as specified in Section 3.13.1. WSDOT reserves the right to contact the Vendor to assist with troubleshooting and repairs when the all proper maintenance procedures have been exhausted.

3.13.1. Warranty

SR520-5.68(b) In the event that WSDOT elects to take on first response maintenance responsibility, the Vendor shall warrant each Hardware part supplied by the Vendor to be free from defects in material and workmanship, under normal use, for at least one (1) year after WSDOT has certified the Vendor has met the Shared Maintenance Transition Milestone and a written Amendment has been executed by both parties..

SR520-5.68(c) If WSDOT determines that any of the Hardware has not met the requirements set forth in this Contract at any time within the warranty period, then the Vendor shall correct such Hardware, even if the performance of such corrective Work extends beyond the stated warranty period.

SR520-5.68(d) Hardware repaired or replaced under warranty shall be exactly the same as the original part, unless approved in writing by WSDOT.

SR520-5.68(e) The Vendor shall be responsible for all required Products, labor and expenses, including shipping, travel, meals, and lodging, associated

with providing the required warranty Services and shall not be reimbursed for said items.

SR520-5.68(f) The warranties shall also apply to all Work re-done, repaired, corrected or replaced by the Vendor in the performance of its obligation to maintain the System during the maintenance period.

SR520-5.68(g) The warranties as to each such re-done, repaired, corrected or replaced element of the Work during the maintenance term shall remain in effect until one (1) year after acceptance by WSDOT of such element of the Work.

4. SHARED MAINTENANCE TRANSITION

- SR520-5.69 If WSDOT so chooses, WSDOT will set a date, at least one hundred eighty (180) Calendar Days in advance, for the Shared Maintenance Transition.
- SR520-5.70 The Vendor shall satisfy the conditions in Section 4.1 for WSDOT to certify the Vendor has met the Shared Maintenance Transition **Milestone**.
- SR520-5.71 The Vendor shall not receive payment for the Shared Maintenance Transition until WSDOT certifies the Vendor has met the Shared Maintenance Transition Milestone.

4.1. Shared Maintenance Activities

4.1.1. Milestone Requirements

- SR520-5.72 The Vendor shall not be released from any maintenance obligations until each of the below Qualifying Events are met to the satisfaction of WSDOT, as a written Amendment to the Contract and mutually agreed upon by the Vendor and WSDOT.
- a. Transition Plan – A detailed plan outlining the process the Vendor will follow to transition first response operations and maintenance of the System to WSDOT as specified in Section 4.1.2;
 - b. Inspection – A detailed inspection of the TCS will be performed by WSDOT and the Vendor to create a **Punch List** documenting any deficiencies prior to transition;
 - c. Maintenance Records – the Vendor shall provide to WSDOT all current and historical maintenance records, Product support contact information, outstanding Product and second source Product warranty paperwork, Service records, and other relevant documentation to WSDOT as appropriate;
 - d. Spares Parts and Tools – the Vendor shall transfer all spare parts and tools to WSDOT required to perform first response maintenance. The spare parts will be cross-referenced with MOMS to ensure that all parts are transferred to WSDOT and shall be in good working order;
 - e. Passwords – the Vendor shall provide all System passwords, user names, and other access and System security information to WSDOT as need to perform the maintenance Work;

- f. Training – the Vendor shall provide maintenance training to designated WSDOT staff to the satisfaction of WSDOT as specified in Section 4.1.3;
- g. Documents, Manuals, and Drawings – The Vendor shall provide revised, fully updated versions of all System documents (i.e. **SDD**, Maintenance Plan, etc.), Operations and Maintenance Manual, **As-Built**s, and other relevant documentation to WSDOT as specified in Section 4.1.4; and
- h. Punch List – The Vendor shall complete all items on the Punch List prior to the Shared Maintenance Transition Milestone unless otherwise agreed to in writing by WSDOT.

4.1.2. Transition Plan

- SR520-5.73 The Vendor shall prepare and submit a Transition Plan that describes the process the Vendor will follow to transition first response operations and maintenance of the System to WSDOT and terminate its first response Services hereunder at the Shared Maintenance Transition Milestone is met.
- SR520-5.74 The Vendor shall submit a draft Transition Plan to WSDOT for review ninety (90) Calendar Days prior to the Shared Maintenance Transition Milestone.
- SR520-5.75 The Vendor shall submit a final Transition Plan to WSDOT for approval sixty (60) Calendar Days prior to the Shared Maintenance Transition Milestone.

4.1.3. Transition Training

- SR520-5.76 In the event that WSDOT elects to take on first response maintenance responsibility, the Vendor shall provide relevant information, procedures, and instructions to WSDOT personnel and their agents on the proper operation and maintenance of the TCS.
- SR520-5.77 WSDOT and the Vendor shall coordinate the method, duration, time, and location of the training.
- SR520-5.78 The Vendor shall provide a minimum of four (4) hours of classroom training in a WSDOT-provided facility for up to twelve (12) persons in each of the following categories:
 - a. System Administration Personnel
 - b. Office Engineering Personnel (servers/Software)

- SR520-5.79 The Vendor shall provide a minimum of 6 (six) hours of classroom training in a WSDOT-provided facility for up to twelve (12) persons in each of the following categories:
- a. Toll Program Oversight Personnel
 - b. Field Maintenance Personnel
- SR520-5.80 Classroom training shall follow the Transition Plan section related to training and reference both the Maintenance Plan and the Operations and Maintenance Manual, where applicable.
- SR520-5.81 Classroom training shall be completed no later than fifteen (15) Calendar Days prior to the transfer of first response maintenance responsibility to WSDOT.
- SR520-5.82 In addition to classroom training, training for field personnel shall consist of printed materials accompanied by verbal instructions and hands-on training or job shadowing with the applicable Product and operating environment for the System.
- SR520-5.83 All user accounts shall be established before the training program begins although a guest account may be used for training purposes.
- SR520-5.84 All WSDOT user accounts required during Shared Maintenance shall be verified by each user during training.
- SR520-5.85 All training materials shall be provided by the Vendor (i.e., manuals, media, source documents, white papers, etc) and shall be submitted to WSDOT thirty (30) Calendar Days prior to the date training is scheduled to take place.
- SR520-5.86 The Vendor shall grant WSDOT permission to reproduce the training materials at WSDOT's discretion.
- SR520-5.87 The training shall incorporate a final production version (or up to date test environment) of all user interfaces and Products.
- SR520-5.88 The Vendor shall supply four (4) training terminals with simulation Software to simulate real conditions.
- SR520-5.89 Simulated or actual data shall be populated into the System so that users may experience all aspects of System operation including, but not limited to, live or simulated Transaction monitoring, image monitoring, **DVAS** monitoring, MOMS monitoring and notification, performance measure calculations, and reporting functions.
- SR520-5.90 The Vendor shall provide annual refresher retraining, if requested by WSDOT, within thirty (30) Calendar Days of each anniversary of the Shared Maintenance Transition Milestone, including a minimum of two (2) hours of classroom training for up to twelve (12) persons of System Administration and Office Engineering Personnel and a minimum of four (4) hours of classroom training for up to twelve

(12) persons of Toll Program Oversight and Field Maintenance Personnel in a WSDOT-provided facility.

- SR520-5.91 The Vendor shall provide a draft agenda including the topics and skills to be refreshed as well as all training materials thirty (30) Calendar Days before refresher retraining commences.

4.1.4. Operations and Maintenance Manual

- SR520-5.92 The Vendor shall prepare an Operations and Maintenance Manual that details all procedures necessary for the System administration, operations, and maintenance that WSDOT will be responsible to perform as a result of the Vendor transferring its first response Services hereunder.
- SR520-5.93 The Vendor shall submit a draft version of the Operations and Maintenance Manual to WSDOT for review sixty (60) Calendar Days prior to the Shared Maintenance Transition Milestone.
- SR520-5.94 The Vendor shall submit a final version of the Operations and Maintenance Manual to WSDOT for approval thirty (30) days prior to the Shared Maintenance Transition Milestone.

4.2. Continued Vendor Responsibilities

- SR520-5.95 During the Shared Maintenance period, the Vendor shall provide changes or updates to the Maintenance Plan, Operations and Maintenance Manual, other relevant documentation, interfaces, reports, or equipment to WSDOT within fifteen (15) Calendar Days of implementation of the change or update.
- SR520-5.96 The Vendor will continue to provide all maintenance support other than first level response as defined in the Transition Plan, the Maintenance Plan, and the Operations and Maintenance Manual.
- SR520-5.97 Not used.

* * * End of Appendix * * *